

**Environmental Cooperative Agreement  
between  
Madison Gas and Electric Company  
and  
Wisconsin Department of Natural Resources**

This agreement is being entered into pursuant to s. 299.80 Wis. Stat. and represents the conditions negotiated and agreed upon by Wisconsin Department of Natural Resources (WDNR) and Madison Gas and Electric Company (MGE or "the Company") for the purpose of providing an alternative method for the regulation of environmental impacts from MGE's Blount Generating Station.

FOR AND IN CONSIDERATION of the terms and conditions contained in this agreement, WDNR and the Company set forth the following:

**I. FACILITY INFORMATION.**

This agreement applies only to the following facility (see attached map):

Madison Gas and Electric Company  
Blount Generating Station  
717 East Main Street  
Madison, Wisconsin 53703  
FID #113004430

Blount Generating Station (BGS) is located on the isthmus in downtown Madison in Dane County. The plant consists of nine boilers and six turbine generators with a total installed capacity of 200 MW. BGS typically generates electricity daily throughout the year but is not considered a base load plant. It produces about 10-15% of the electricity used by MGE's 125,000 customers.

Two of the boilers at BGS burn natural gas only. Four other boilers are capable of burning either natural gas or #2 fuel oil. The three remaining boilers are primarily fueled by coal or natural gas, but are also permitted to burn certain alternate fuels: boiler cleaning wastes, waste oil, petroleum-contaminated adsorbents, wood, paper/poly wastes (called paper-derived fuels or "PDF"), and switchgrass. Exhaust gases from these last three boilers are routed through a mechanical cyclone collector and an electrostatic precipitator whenever coal or alternate fuels are burned. These control devices remove more than 95% of the fly ash before routing the exhaust gases to a 250-foot stack. Emissions to the air include nitrogen oxides, particulate matter, sulfur dioxide, carbon monoxide, volatile organic compounds, and mercury. All fuels, including the alternate fuels, are reviewed by WDNR to ensure compliance with all environmental requirements.

The principal wastes generated at BGS are ash, wastewater sludge, coal rejects, and boiler cleaning wastes. Two types of ash are generated during combustion of fossil fuels: bottom ash and fly ash. Bottom ash consists of larger particles that are collected at the bottom of the boiler. Fly ash is a finer ash material that is collected from the mechanical collectors and electrostatic precipitators. Coal rejects are impurities found in the coal, such as hard coal, rocks, and pyrites, that are mechanically separated from the coal feed system. Wastewater sludge is generated from the treatment of coal pile runoff. Boiler cleaning wastes are produced from the removal of scale and corrosion products. Bottom ash, fly ash, coal rejects, and

wastewater sludge are all disposed in landfills. BGS is currently permitted to combust non-hazardous boiler cleaning waste. BGS is also a small quantity generator of hazardous waste from miscellaneous activities.

BGS uses two sources of water in its electric generation process. The water is either drawn from a high-capacity well located on the property or drawn from Lake Monona. Water drawn from the high-capacity well is used as boiler water make-up for steam production. The water goes through a reverse osmosis system, a demineralizer system, and a deaerator to remove impurities and oxygen, thus preventing corrosion in the boilers. From the deaerator, the water goes either into one of nine boilers or into a condensate storage tank. After the water is heated in the boiler to create steam, it is passed through a turbine, enters a condenser, and is pumped back to the boiler to repeat the steam cycle. After accumulating impurities through the steam production process, the recycled water is eventually cooled and discharged to the sanitary sewer.

Water drawn from Lake Monona is used as non-contact cooling water throughout the plant to cool down water throughout the steam cycle. The majority of the water is used in one of the six steam turbines to condense the steam after it passes through the turbine blade stages. The lake water is then discharged back to Lake Monona. Smaller amounts of lake water are also used to cool auxiliary equipment and water samples from boilers and steam production for laboratory analysis to maintain the proper water chemistry required to operate the steam cycle without damaging the equipment used.

The majority of the stormwater from BGS is piped to go through one of four outfalls included in a direct discharge permit. The rest of the stormwater goes out through one of two stormwater outfalls covered under a stormwater permit. All outfalls except for Outfall 008 go directly to Lake Monona without treatment (see attached map). Outfall 008 is treated to remove solids and adjust pH.

## **II. DEFINITIONS.**

The following definitions are applicable to this agreement:

- A. "Approval" means a permit, license or other approval issued by the department under chs. 280 to 295, Wis. Stats.
- B. "Cooperative agreement" means an agreement entered into under section 299.80(6), Wis. Stats.
- C. "Environmental management system" means an organized set of procedures implemented by the owner or operator of a facility to evaluate the environmental performance of the facility and to achieve measurable or noticeable improvements in that environmental performance through planning and changes in the facility's operations.
- D. "Environmental performance" means the effects, whether regulated under chs. 280 to 295, Wis. Stats. or unregulated, of a facility on air, water, land, natural resources and human health.
- E. "Facility" means all buildings, equipment and structures located on a single parcel or on adjacent parcels that are owned or operated by the same person.
- F. "Interested person" means a person who is or may be affected by the activities at a facility that is covered or proposed to be covered by a cooperative agreement or a representative of such a person.

- G. "Performance evaluation" means a systematic, documented and objective review, conducted by or on behalf of the owner or operator of a facility, of the environmental performance of the facility, including an evaluation of compliance with the cooperative agreement covering the facility, approvals that are not replaced by the cooperative agreement and the provisions of chs. 280 to 295, Wis. Stats. and rules promulgated under those chapters for which a variance is not granted under section 299.80(4), Wis. Stats.
- H. "Pollutant" means any of the following:
1. Any dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, munitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded equipment, rock, sand, cellar dirt, or industrial, municipal, or agricultural waste discharged into water or onto land.
  2. Any dust, fumes, mist, liquid, smoke, other particulate matter, vapor, gas, odorous substances or any combination of those things emitted into the air, but not uncombined water vapor.
- I. "Violation" means a violation of a cooperative agreement, of an approval that is not replaced by the cooperative agreement or of a provision of chs. 280 to 295, Wis. Stats. and rules promulgated under those chapters for which a participant has not received a variance under section 299.80(4), Wis. Stats.

### **III. PERIOD OF AGREEMENT.**

This agreement shall commence, subject to its signing by both parties on September 26, 2002, and continue until September 26, 2007, during which period the Company and WDNR shall abide by all terms and conditions contained herein. This agreement may be renewed up to five years pursuant to s. 299.80(6e), Wis. Stats.

### **IV. AMENDMENT/REVOCATION.**

Pursuant to s. 299.80(7), Wis. Stats., WDNR may amend this agreement with the consent of the Company or for cause. WDNR may revoke an agreement at the request of the Company or if the Company is in substantial noncompliance, refuses to amend this agreement, is unable or unwilling to meet commitments to superior environmental performance, or have not addressed a substantive issue raised by a majority of the interested persons (s. 299.80 (7), Wis. Stats). Furthermore, at any time during the period of the agreement the Company may request to reopen the agreement for potential modifications to reflect changing business conditions, environmental performance goals, modification or inclusions of other provisions, or for other valid reasons as mutually agreed with WDNR. The Company may request amendment or revocation of this agreement, as appropriate, in order to participate in other voluntary environmental regulatory programs that currently exist or may be created in the future. Furthermore, this agreement shall not prevent the Company from simultaneously participating in other voluntary environmental regulatory programs that currently exist or may be created in the future. WDNR shall provide at least 30 days for public comment on the proposed amendment or revocation of a cooperative agreement and an opportunity for a hearing if comments demonstrate considerable public interest in the proposed action.

### **V. ENTIRE AGREEMENT.**

This agreement, together with any specifications, referenced parts, attachments, and effective amendments, shall constitute the entire agreement. Communications or understandings made prior to the signing of this

agreement and pertaining to its subject matter are hereby superseded. All revisions to this agreement must be made by a written amendment to this agreement, signed by both parties, and issued under the same procedures as this agreement.

## **VI. APPROVALS COVERED.**

This agreement modifies the terms of certain WDNR approvals previously granted MGE. This agreement also grants certain new approvals to MGE. The approvals covered by this agreement are as follows:

### **A. Air Pollution Control.**

1. Sections X and XI of this agreement modify certain specific requirements in MGE's existing air pollution control operation permit for BGS (#113004430-P01). Any requirements in the operation permit that are not specified in Sections X and XI are unchanged by this agreement.

### **B. Solid Waste Management.**

1. This agreement establishes a streamlined process by which WDNR shall grant or deny approval to MGE to burn non-industrial solid wastes as PDF at BGS. This process applies only to new non-industrial solid waste materials not previously approved by WDNR. This agreement does not change the existing process for industrial waste. The streamlined process is as follows:
  - a. MGE shall provide the waste management and air management representatives of the WDNR multi-discipline regulatory and compliance assistance team for BGS with a written request for approval to burn any non-industrial waste not previously approved.
  - b. Each request shall include the following required information:
    - Description of waste;
    - Uniformity of waste including potential contaminants;
    - Source(s) of waste;
    - Describe, if any, changes in ash disposal required by burning the solid waste;
    - Bulk chemical analysis;
    - Lab analysis for heat input that demonstrates that the burning of this product will not cause an exceedance of the heat input limitation found in Section I.G.2.a.(2) of BGS's operating permit;
    - Emission estimates that demonstrate the burning of this product will not cause an exceedance of the National Ambient Air Quality Standards; and,
    - Emission estimates that demonstrate the burning of this product will not cause an exceedance of any regulatory threshold under ch. NR 445, Wis. Adm. Code.

WDNR will determine on a case-by-case basis whether stack testing is required, the pollutants to be tested, and the time frame for any such testing. The format or content requirements for these requests may change at any time upon mutual consent of the parties without requiring amendment of this agreement.
  - c. WDNR shall review each written request provided by MGE. If WDNR does not object or request additional information from MGE within 30 days of receiving the request, MGE is automatically granted approval to burn the waste at BGS. In addition, at any time prior to the 30-day deadline WDNR may notify MGE in writing if WDNR does not object to the request. WDNR shall object in writing if combustion of the waste will violate any air pollution control requirement or permit condition, any other environmental standard, or any other provision of this agreement.
  - d. WDNR hereby approves the use of Brakebush and VIM materials as PDF. WDNR already reviewed these materials for purposes of Section VI.B.1.c.

- e. The burning of approved PDF materials at BGS shall not subject BGS to municipal waste combustor licensing or standards.

C. Wastewater Discharge Elimination.

1. WDNR will revoke coverage for BGS under the Tier 2 general stormwater permit and confer coverage under the Tier 3 general stormwater permit (#WI-S049158-2) by October 6, 2002.

Major Differences Between the Tier 2 and Tier 3 Industrial Storm Water Discharge Permits

<b>Tier 2</b>	<b>Tier 3</b>
Preparation and implementation of a storm water pollution prevention plan (SWPPP)	No SWPPP required (However, MGE has prepared one)
Submit summary of SWPPP to WDNR	No SWPPP summary required (However, MGE has submitted one)
Perform and document quarterly visual inspections	No quarterly visual inspections required
Perform and document Annual Facility Site Compliance Inspections (AFSCI)	Perform and document Annual Facility Source Exposure Inspections (less rigorous than an AFSCI)
Annual permit fee of \$100	No annual fee

MGE will continue implementing the existing SWPPP, but strict adherence to the SWPPP is not a compliance requirement under this agreement or under the Tier 3 discharge permit.

2. Section XI of this agreement modifies certain requirements in MGE's existing Wisconsin Pollutant Discharge Elimination System permit for direct discharges to Lake Monona (#WI-0001961-6). Any requirements in that wastewater permit that are not specified in Section XI are unchanged by this agreement.

## **VII. INTERESTED PERSONS GROUP.**

MGE agrees to an innovative approach to environmental performance and regulatory compliance for BGS. MGE has established and shall maintain an interested persons group called the MGE Community Environmental Advisory Group (CEAG) to provide objective input. The CEAG is a group of interested persons who live, own a business, or work within MGE's service area and may be affected by the activities of BGS. The CEAG will review and comment on BGS's Environmental Management System and its performance.

MGE commits to work with community and WDNR representatives assigned to the facility. MGE will solicit public comments concerning MGE's participation in this agreement during the CEAG meetings or other meetings with community groups or employees. A representative from MGE or a person hired by MGE will take notes during CEAG meetings. Those notes will be compiled into minutes that summarize the information discussed at CEAG meetings. Minutes will be organized by topic and will be content oriented. Minutes will not be an exact recounting of conversations. MGE employees will review the

minutes internally before providing them in draft form to CEAG members and WDNR representatives. CEAG members will have an opportunity to approve or suggest corrections to the minutes at the next CEAG meeting. Corrections based on suggestions will be e-mailed to CEAG members for approval. Once approved by CEAG, a copy of the minutes will be filed in MGE's Corporate Records and a copy of the minutes will be posted on MGE's web site for public review. Individual members of the CEAG will be solicited and encouraged to provide suggestions into MGE's efforts regarding its environmental performance. MGE representatives will consider and respond to issues raised by the group. These responses will be provided in writing, and/or at further group meetings, and/or through discussions with a member(s). MGE will make reports, assessments, meeting minutes, and responses to public comment publicly available at MGE offices. Meeting minutes will also be posted on MGE's web site.

A detailed description of the CEAG is included in Appendix A of this agreement.

## **VIII. COMMITMENT TO ENVIRONMENTAL MANAGEMENT SYSTEM.**

The Company commits to improving the existing Environmental Management System (EMS) for BGS to make it comparable to the requirements of ISO 14001 by September 26, 2004. Elements of the EMS that directly support implementation of this agreement shall be implemented as soon as practicable given resource constraints. Readily available data on this EMS shall be reported by MGE to the National Database on Environmental Management Systems developed by The Environmental Law Institute and the University of North Carolina.

## **IX. COMMITMENT TO SUPERIOR ENVIRONMENTAL PERFORMANCE.**

MGE commits to pursue superior environmental performance at BGS, reasonable to achieve measurable or noticeable improvements in its environmental performance. It also commits to reduce waste generation and the use of natural resources while achieving a balance among the economic, social, and environmental impacts of these efforts. As part of MGE's commitment to superior environmental performance, it commits to going beyond what would otherwise be required under traditional environmental regulatory programs at BGS. With that background, MGE establishes the following specific commitments and agrees to include in its documented EMS appropriate objectives, targets, and programs related to each commitment:

### **A. Air Pollution Control.**

1. MGE shall continue its BGS No. 8 boiler combustion improvement study toward achieving the following objectives:

- Further improve stack opacity;
- Maintain NO<sub>x</sub> levels <0.5 lb/mmBTU;
- Increase use of alternate fuels to at least 25% by heat content;
- Reduce fly ash carbon content to below 10%; and,
- Maximize boiler efficiency as allowed by the above constraints.

MGE has discretion as to whether it will implement any recommendations that may be set forth in the study. The incremental cost-effectiveness of a recommendation is one of many factors that MGE may consider in deciding whether to implement a recommendation.

2. In addition to the combustion improvement study, MGE will install new pollution control devices by the end of December 2003 that enhance the performance of the electrostatic precipitator on No. 8 boiler. These devices are called pulsers. The devices are designed to impose a high-frequency pulse on

top of the existing DC voltage to enhance the collection efficiency on the electrostatic precipitator. MGE already has these devices on its No. 9 boiler precipitator.

3. MGE will purchase biodiesel for all diesel fuels supplied to the MGE refueling station at its Central Service Center at 120 South Baldwin Street in Madison, Wisconsin. This purchase is based upon the price difference between conventional diesel fuel and biodiesel being \$0.16 per gallon. If this price differential increases significantly or biodiesel becomes reasonably unavailable, this program may be suspended.
4. MGE shall quantify on an ongoing basis any significant voluntary emissions reductions achieved at BGS. MGE shall report such reductions in its periodic performance evaluations or register the reductions in WDNR's Voluntary Emissions Reduction Registry when procedures for the Registry are established.
5. MGE shall submit a plan within one year after signing this agreement for conducting voluntary research on fuels, operating techniques, and/or control equipment intended to reduce emissions from backup generators. MGE will undertake this voluntary research if WDNR determines, following normal procedures, that the plan is eligible for a research and testing exemption under s. NR 406.04(1)(i), Wis. Adm. Code. MGE will include the results of any such research in an environmental performance evaluation and submit the performance evaluation results in a report meeting the requirements of s. 299.80(12), Wis. Stats. In the unlikely event that research inadvertently leads to unexpected temporary emission levels that exceed regulatory or permit limits, such research will be eligible for deferred civil enforcement in accordance with s. 299.80(14), Wis. Stats.
6. Within 9 months of signing this agreement, MGE shall submit an analysis to WDNR and the CEAG evaluating reasonably available options for further reducing air pollution from BGS. The analysis shall focus on reducing those criteria pollutants that have the greatest potential for localized impacts utilizing multi-pollutant control strategies and/or mitigation measures. At a minimum, the analysis shall:
  - Evaluate strategies demonstrated in practice on full-scale operations within the utility industry including the increased use of alternative fuels;
  - Quantify the level of emission reductions that could be reasonably expected by utilizing each identified strategy at BGS;
  - Evaluate any collateral environmental and safety impacts of each identified strategy;
  - Compare the control effectiveness of each strategy to existing emission limitations for each pollutant;
  - Evaluate the effect on customers from utilizing each strategy; and
  - Evaluate the incremental cost-effectiveness of each option.

This analysis will create the opportunity for MGE to discuss with WDNR, CEAG, and others potential emission reduction goals for BGS. The goals shall be primarily based upon integrated, multi-pollutant control strategies and may be expressed as total annual emission reductions and/or emission reductions per defined unit (e.g., lbs/mmBTU, etc.) The analysis and list of potential goals shall be made available for further input, discussion, and refinement by the Public Service Commission, as appropriate.

#### B. Solid Waste Management.

1. MGE shall increase the amount of waste material that can be reasonably diverted from landfills for use as a fuel source at BGS, provided that combustion of these waste materials meets all air pollution control standards and is environmentally equivalent to or preferable to coal combustion.
2. MGE shall strive to beneficially reuse more of the BGS combustion byproducts (bottom ash and fly ash) in keeping with the following specific commitments:
  - a. Within 2 months of signing this agreement, MGE and WDNR shall each designate a contact person for issues related to the beneficial reuse of ash;

- b. Within 6 months of signing this agreement, MGE shall provide the WDNR contact with a completed initial certification form, including test results, as described in ch. NR 538, Wis. Adm. Code, for the ash produced at BGS; and,
  - c. Within 12 months of signing this agreement, MGE shall provide the WDNR contact with a report identifying and evaluating the feasibility of potential beneficial uses for BGS ash. As part of this report, MGE shall assess how increasing the proportion of waste materials in its fuel mix might affect the potential for beneficial reuse of ash. The report shall also address the possibility of resuming the burning of ash from the University of Wisconsin's Charter Street generating station in the boilers at BGS.
3. MGE shall continue its voluntary mercury thermostat recycling program and allow select non-customers (e.g., building contractors) as well as customers to drop off mercury-containing thermostats and other devices for recycling. As part of this program, MGE shall alert the selected non-customers in its service area to the availability of this program within 6 months of signing this agreement.
  4. MGE shall submit with its Baseline Performance Evaluation a detailed plan for managing mercury-containing equipment throughout the Company, with highest priority assigned to BGS. The plan shall include:
    - a. A process and schedule for inventorying equipment known or suspected to contain mercury;
    - b. A plan and schedule for systematically replacing mercury-containing equipment with mercury-free alternatives where justified considering economics, risk, and availability of alternatives; and,
    - c. A plan for recycling any mercury collected through these efforts.
  5. MGE shall submit with its Baseline Performance Evaluation a detailed plan for systematically inventorying and replacing PCB transformers throughout the Company and responsibly managing any wastes generated through these efforts.
  6. Within 12 months of signing this agreement, MGE shall invite a WDNR hazardous waste specialist and a representative of the University of Wisconsin's Center for Environment and Energy to tour BGS and collaborate to identify other potential hazardous waste minimization or prevention opportunities.

C. Wastewater Discharge Elimination.

1. MGE shall propose a voluntary stormwater pollution prevention demonstration project in consultation and cooperation with WDNR and other appropriate interested parties. The purpose of the demonstration project will be to evaluate the performance of different storm water treatment practices for the removal of pollutants from storm water runoff. The extent of monitoring of the demonstration project will be dependent on the level of cost sharing between MGE, WDNR, and any other participants. MGE shall submit the proposal with its Baseline Performance Evaluation.
2. MGE shall conduct or commission a study on the feasibility of recovering heat from non-contact cooling water for local use and to reduce thermal discharge to Lake Monona. This study may, at MGE's discretion, be combined with the cogeneration study required under D.1. below, but the evaluation of heat recovery options should not be limited to cogeneration. MGE has discretion as to whether it will implement any recommendations that may be set forth in the study. The incremental cost-effectiveness of a recommendation is one of many factors that MGE may consider in deciding whether to implement a recommendation.

D. Other.

1. MGE shall conduct or commission a study on the feasibility, costs and benefits, and potential regulatory and economic implications of a combined heat and power (cogeneration) project at BGS. WDNR shall contribute time and expertise at MGE's request to assist in the analysis of environmental regulatory issues. The Wisconsin Department of Administration (DOA) will also be available for



consultation upon MGE's request, based on DOA's overall knowledge of energy issues, its years of experience with cogeneration, and its responsibility for managing many of the buildings near BGS. MGE has discretion as to whether it will implement any recommendations that may be set forth in the study. The incremental cost-effectiveness of a recommendation is one of many factors that MGE may consider in deciding whether to implement a recommendation. *[Note that DOA is not a signatory to this agreement and cannot be bound by this agreement, but has made a verbal commitment to consultation.]*

2. MGE shall work with the CEAG to establish a procedure for identifying and responding to noise concerns in an appropriate and timely manner.

## **X. POLLUTION LIMITS.**

This agreement establishes new air pollution limits for BGS that are at least as stringent as the limits required under ch. 285, Wis. Stats., and chs. NR 400-499, Wis. Adm. Code. These new limits are included in this agreement to guarantee superior environmental performance and to ensure that the operational flexibility granted in Section XI below does not result in air emissions that exceed environmental standards. Any provisions of permits or approvals covered by this agreement that are not specifically superseded below or in Section XI shall remain in effect. Furthermore, this agreement does not relieve MGE from the obligation to abide by any future applicable pollution limits.

### **A. Air Pollution Control.**

1. MGE's existing air pollution control operation permit for BGS (#113004430-P01) includes a limit on the amount of PDF that may be used to generate electricity. This production limit was established as a surrogate for emission limits for certain hazardous air contaminants regulated under s. NR 445.05(3), Wis. Adm. Code, and was based on worst-case assumptions. Under this agreement, the surrogate production limit in the permit is waived and replaced by the actual emission limits on which it was based. Specifically, Condition I.G.3.a.(2) in the operation permit is waived and replaced with the following emission limits:
  - a. Total air emissions of arsenic (including arsenic in inorganic compounds) from PDF combustion may not exceed 9 pounds over any 12 consecutive months.
  - b. Total air emissions of beryllium (including beryllium in compounds) from PDF combustion may not exceed 13 pounds over any 12 consecutive months.
  - c. Total air emissions of cadmium (including cadmium in compounds) from PDF combustion may not exceed 21 pounds over any 12 consecutive months.
  - d. Total air emissions of nickel (including nickel in compounds other than nickel subsulfide) from PDF combustion may not exceed 187 pounds over any 12 consecutive months.

Note: The emission limits above are set at levels to ensure that PDF emissions at BGS, when *combined with all other non-exempt emissions* of the same substances, will not exceed the thresholds in Table 3 of ch. NR 445, Wis. Adm. Code. New compliance demonstration methods and recordkeeping requirements are described below in Section XI of this agreement.

## **XI. OPERATIONAL FLEXIBILITY AND VARIANCES.**

This agreement grants MGE more flexibility in operating BGS. Details are provided below. Any provisions of permits or approvals covered by this agreement that are not specifically superseded below or in Section X above shall remain in effect.

## A. Air Pollution Control.

1. This agreement waives the coal pile density requirements in Conditions I.P.1.b.(5)(a)(vii), I.P.1.b.(7), and I.P.1.c.(5)(e)-(g) of the BGS air pollution control operation permit (#113004430-P01). Coal pile density monitoring is no longer necessary due to permanent facility improvements.
2. This agreement modifies Conditions I.G.1.a.(2) and (3) of the BGS air pollution control operation permit (#113004430-P01) which previously authorized MGE to burn PDF manufactured from preconsumer industrial waste, but forbade MGE from burning municipal solid waste. This agreement does not change authorization to burn industrial waste and now grants MGE approval to burn as PDF any non-industrial waste previously approved by WDNR or approved in accordance with the process described in Section VI.B. above.
3. This agreement also supersedes the quantity limit on the use of PDF in Condition I.G.3.a.(2) of the BGS air pollution control operation permit (#113004430-P01). The Environmental Cooperative Agreement will allow MGE to burn greater quantities of PDF as long as MGE can show BGS does not exceed the emission limitations under the National Ambient Air Quality Standards and Wisconsin's Hazardous Air Pollutant Rule. In addition, MGE will need to comply with the pollution limits in Section X.A. above, the requirements in items A.5. and A.6. of this section, and all operation permit conditions not superseded by this agreement.
4. This agreement waives the limit on nickel concentration for PDF in Condition I.G.3.a.(3) of the BGS air pollution control operation permit (#113004430-P01).
5. This agreement supersedes the compliance demonstration requirements in Condition I.G.3.b.(2) of the BGS air pollution control operation permit (#113004430-P01). MGE shall demonstrate compliance with each of the pollution limits in Section X.A. using the following methodology:
  - a. Within 15 days of the end of each month, MGE shall estimate actual emissions from PDF combustion for the previous month and sum the estimated emissions for the preceding 6- and 12-month periods.
  - b. MGE shall estimate monthly emissions for arsenic, beryllium, cadmium, and nickel using the following equation and data sources or another method approved by WDNR:
 
$$\text{Emissions} = [\text{AMT}] * [\text{CONC}] * [\text{ASH}] * [1 - \text{CE}] * [2000 \text{ pounds per ton}]$$

where...

**AMT** = tons of PDF burned;

**CONC** = average concentration of arsenic, beryllium, cadmium, and nickel in the PDF burned, based on the same sampling and analysis procedures already required for nickel under Condition I.G.3.c.(4) of the operation permit. If any sampled concentration is below the detection limit, MGE shall assume the concentration is equal to the detection limit;

**ASH** = portion of the ash created from PDF combustion that is emitted as fly ash, which shall be assumed to be 80% (i.e., 0.80) unless otherwise demonstrated by MGE or WDNR; and,

**CE** = combined particulate matter control efficiency of the cyclone and electrostatic precipitator, which shall be assumed equal to the efficiency achieved in the most recent stack test.
  - c. Within 15 days of estimating monthly emissions from PDF, MGE shall notify the WDNR air compliance inspector for BGS if emissions for the preceding 6-month period exceed 50% of any of the pollution limits in Section X.A., and describe any measures that will be taken to ensure 12-month totals will not exceed the limits.
6. This agreement supersedes the recordkeeping requirements in Condition I.G.3.c.(3) of the BGS air pollution control operation permit (#113004430-P01). Instead, MGE shall keep records sufficient to document the compliance demonstration described above.

7. WDNR and MGE will expedite the review of other alternative fuels to determine if they warrant similar flexibility on compliance methods for NR 445 emission limits and control requirements. This agreement could potentially be amended as a result. The goal of such flexibility is to promote increased use of non-exempt fuels that are cleaner burning than coal, which is an exempt fossil fuel.
8. WDNR will strive to provide greater incentives, if possible, for conservation, efficiency, and development of new wind or solar energy capacity by MGE.
9. This agreement waives the opacity monitoring requirements in Conditions I.C.2.c.(2) and I.E.2.c.(2) of the air pollution control operation permit (#113004430-P01) in situations where the opacity monitor is being serviced, so long as the units are combusting 100% natural gas.
10. This agreement waives the need to have supervisory personnel perform inspections of the coal yard activities (refer to Section O of the permit). Any personnel may be able to perform the visual inspections of coal yard activities when they are not performing the activity being evaluated.
11. MGE shall submit the results of monitoring or a summary of monitoring results required by Condition I.AB.1.a.(1) of the BGS air pollution control operation permit (#113004430-P01) every year instead of every 6 months.
12. WDNR shall review each written request submitted by MGE to use alternative ASTM methods for fuel analysis. If WDNR does not object or request additional information from MGE within 7 days of receiving the request, MGE is automatically granted approval to use the alternative ASTM methods. This will typically be used in situations when an improved method of analysis has been developed, a method has been updated, or to obtain a lower detection limit.
13. This agreement waives the coal pile spraying requirements in Condition I.P.1.b.(5)(c) of the BGS air pollution control operation permit. Coal pile spraying is no longer necessary due to permanent facility improvements. At any time during the agreement, WDNR may suspend this waiver if existing fugitive dust controls for the coal pile are inadequate.

B. Solid Waste Management.

1. This agreement grants MGE greater flexibility to use waste materials as alternative fuels, provided they comply with air pollution control and ash quality requirements. Refer to the approval process in Section VI.B. and the operational flexibility provisions in Section XI.A. above for details.

C. Wastewater Discharge Elimination.

1. This agreement supersedes the sample frequency for oil and grease monitoring requirements in the BGS wastewater permit (WPDES #WI-0001961-6). The oil and grease sample frequency shall immediately be reduced from weekly to monthly. In the event that any test results indicate an exceedance of the permit limit for oil and grease, the sample frequency shall immediately revert to weekly until four consecutive weekly tests show that the oil and grease permit limits are met, at which time monthly sampling may resume.

D. Other.

1. WDNR shall assign within 30 days after signing of this agreement a special multi-discipline regulatory and compliance assistance team to BGS that is knowledgeable about BGS operations and the utility industry. This team shall have an intimate knowledge of BGS operations and a working knowledge of the utility industry and utility operations that can affect the environment. The team shall also have working knowledge of non-environmental regulatory matters that affect the utility industry and may impact environmental commitments in this agreement. MGE shall assist WDNR team members in gaining any site-specific or company-specific understanding that is required for this role. The WDNR

team shall provide technical assistance to MGE in pollution prevention, waste minimization, and general environmental compliance best practices. WDNr team members and MGE shall routinely share relevant information via formal and informal communications. The goal is to foster ongoing collaboration between WDNr and MGE.

2. WDNr and MGE shall work cooperatively to develop integrated, cross-media (air, water, waste) electronic reporting capability as soon as practicable.

## **XII. REPORTING OF VIOLATIONS.**

Any violations discovered as part of the baseline or annual environmental performance evaluation shall be disclosed to WDNr within 45 days of the completion of the evaluation in a report containing the information required under s. 299.80(12), Wis. Stats. WDNr may not take any civil enforcement action on any such reported violations if they are corrected within 90 days of notification, unless the violations present an imminent threat to public health or the environment or may cause serious harm to public health or the environment, or the department discovers the violations before the Company discloses them. This does not exempt the Company from the requirements for immediate notification contained in s. 292.11, Wis. Stats.

If a longer period of time is needed to correct the violations, a compliance schedule can be negotiated and the agreement modified allowing a compliance schedule of up to 12 months.

## **XIII. BASELINE AND PERIODIC PERFORMANCE EVALUATIONS.**

Within 180 days of signing this agreement, the Company shall submit to WDNr and the CEAG a Baseline Performance Evaluation for BGS. The Baseline Performance Evaluation shall include the mandatory information described in Section II.G. of this agreement as well as the plans and proposal required under Sections IX.B.4., IX.B.5., and IX.C.1. of this agreement.

Periodic performance evaluations shall be repeated annually on the anniversary date of the baseline submittal or on another date mutually agreed to by WDNr and the Company. Each of these periodic performance evaluations shall include the mandatory information described in Section II.G. of this agreement as well as a broader assessment of MGE's success at reaching the goals of this agreement. The assessment will identify any annual goals and objectives of the previous year. MGE's progress toward reaching those goals will be evaluated based on, among other things, the metrics in this agreement. The assessment will also include a performance evaluation of the EMS implemented under this agreement. Next, the assessment will identify areas of success and areas for improvements. For each area, the reasons for achievements will be analyzed along with recommendations for improvements. Finally, the annual assessment will identify activities or procedures to improve performance in the next year under this agreement. This could include creating new goals or modifying existing goals based on the experience of the preceding year.

In order to assist MGE with the periodic performance evaluations, WDNr shall maintain a record of its own administrative savings and other cost savings associated with this agreement and provide this information to the Company on at least an annual basis.

MGE shall provide a draft of each annual assessment to WDNr and the CEAG for review and comment prior to final publication. MGE shall also solicit suggestions from WDNr and the CEAG on how to

improve performance under the agreement. These comments and suggestions will be summarized and MGE will respond to them in writing or through further discussions with groups or individuals.

MGE shall make copies of all baseline and periodic performance evaluations available for public inspection at MGE offices, the Madison Public Library, and on the Internet.

#### **XIV. APPLICABLE LAW.**

The laws of the State of Wisconsin shall govern this agreement. Except as provided herein, the Company shall at all times comply with all Federal, State, and Local laws, ordinances, and regulations in effect during the period of this agreement.

#### **XV. ADDRESSES.**

MGE and WDNR shall each appoint a representative from their respective organizations to serve as a liaison under this agreement. All correspondence and communications between the parties shall be directed to the designated liaisons. They shall also measure the opinions of employees and the public regarding participation in this program and seek to increase trust among WDNR, the Company, and the public. The current liaisons for MGE and WDNR are listed below. Changes in each organization's liaison or their associated addresses shall be forwarded to the other party once effective and will become part of this agreement without formal amendment.

John Shenot  
Wisconsin Department of Natural Resources  
Bureau of Cooperative Environmental Assistance  
Post Office Box 7921  
Madison, Wisconsin 53707-7921  
608-267-0802  
John.Shenot@dnr.state.wi.us

Michael Ricciardi  
Senior Director - Safety and Environmental Affairs  
Madison Gas and Electric Company  
Post Office Box 1231  
Madison, Wisconsin 53701-1231  
608-252-5627  
mricciardi@mge.com

## **APPENDIX A: Detailed Description of the Community Environmental Advisory Group (CEAG)**

### **A. Potential Scope of Work.**

1. Provide opinions on the draft of the agreement between MGE and WDNR.
2. Learn about MGE's EMS for the BGS, including an orientation to the environmental policy and a tour of BGS.
3. Provide opinion on BGS's EMS.
  - a. Environmental audit results
  - b. Environmental training
  - c. Pollution prevention efforts
  - d. Waste minimization practices
  - e. Monitoring activities
4. Provide feedback on goals and objectives for proposed environmental performance improvement.
5. Review environmental performance under the agreement and seek consensus on potential solutions to any discovered concerns. This performance review will be general in nature. CEAG members will not be asked to conduct technical or scientific reviews or evaluate compliance with regulations.
6. Communicate environmental information about the BGS.
7. Review environmental materials to help MGE effectively communicate with the public about environmental programs and performance.
8. Provide input into a customer survey about perceptions, attitudes, and willingness to pay for increased environmental performance.
9. Participate in a survey to measure MGE's participation in the agreement.
  - a. How does this group think the process is working?
  - b. How well has MGE done at BGS?

### **B. Group Structure.**

1. The CEAG will have seven to nine members with staggering terms so that no more than two-thirds of the membership leaves in any given year. Members will represent a local perspective rather than statewide or national, preferably in the following areas:
  - a. Neighborhood association members from the more immediate area around BGS
  - b. Business
  - c. Developer/contractor
  - d. Government
  - e. Low-income knowledgeable
  - f. Environmental group
2. MGE will strive to include a broad diversity of perspectives such as:
  - a. Technical: Familiar with environmental compliance
  - b. Non-technical: Not familiar with environmental compliance
  - c. Male/female
  - d. Various age groups
  - e. Multicultural

### **C. MGE Representation.**

A core group of MGE employees from Environmental Affairs, BGS, and Marketing will attend all meetings. Depending on specific meeting agendas, others may include officers, operations, facilities maintenance, accounting, pricing, etc.

D. Meeting Process.

A professional facilitator will convene the meetings. MGE will provide meeting notes to all participants.

E. Meeting Logistics.

1. Frequency: As needed (minimum semiannually)
2. Location: An MGE conference room
3. Time: After-work hours, 6 to 9 p.m.
4. Refreshments: Dinner will be served
5. Actual and reasonable expenses to attend the meetings will be paid